



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,805	12/07/2001	Hiromasa Shimizu	HITA.0131	7667

7590 08/01/2003

Stanley P. Fisher
Reed Smith Hazel & Thomas LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042-4503

EXAMINER

SEFER, AHMED N

ART UNIT	PAPER NUMBER
----------	--------------

2826

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,805

Applicant(s)

SHIMIZU ET AL.

Examiner

A. Sefer

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

✓

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. US PG-Pub No. 2002/0054267.

Matsumoto et al disclose in fig. 1-5 a liquid crystal display device comprising: a first substrate 1; a second substrate 11 provided in opposition to the first substrate; a liquid crystal layer 21 provided between the first substrate and the second substrate; and spacers 26 provided on the first substrate, the liquid crystal layer being provided between the spacers and the second substrate.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa et al. USPN 6,583,846.

Yanagawa et al disclose in fig. 1 a liquid crystal display device comprising: a first substrate 1A; a second substrate 1B provided in opposition to the first substrate; a liquid crystal layer provided between the first substrate and the second substrate; and spacers 10 provided on

Art Unit: 2826

the first substrate, the liquid crystal layer being provided between the spacers and the second substrate.

4. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Bergeron et al. USPN 5,897,414.

Bergeron et al disclose (see figs. 1-5 and col. 7, lines 36-51) a liquid crystal display device comprising: a TFT substrate 36; a color filter substrate 68; column-shaped spacers 78 formed on the color filter substrate; and a liquid crystal layer provided between the TFT substrate and the color filter substrate, the respective column-shaped spacers having depressed surfaces on their surfaces to be brought into contact with the TFT substrate, the spacers, when a force is applied between the TFT substrate and the color filter substrate, being deformed and also bringing the bottom portions of their depressed surfaces into contact with the TFT substrate to increase their contact areas.

4. Claim 3 is rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa et al. USPN 6,583,846.

Yanagawa et al disclose in fig. 25 liquid crystal display device comprising: a TFT substrate 1A; a color filter substrate 1B; and column-shaped spacers 10 which retain the gap between both the TFT substrate and the color filter substrate; the respective column-shaped spacers having contact surfaces which are disposed in contact with one of the TFT substrate and the color filter substrate and are respectively placed at boundary positions of steps provided on the substrate, the respective contact surfaces of the column-shaped spacers being disposed in contact with the steps at top-side portions thereof while an ordinary gap between both substrates is being retained, but when an external force is temporarily applied, the column-shaped spacers

Art Unit: 2826

being elastically deformed and being also brought into contact with bottom-side portions of the respective steps.

5. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa et al. USPN 6,583,846.

Yanagawa et al disclose in fig. 25 liquid crystal display device comprising: a TFT substrate 1A; and a color filter substrate 1B, column-shaped spacers 10 for retaining the gap between both the TFT substrate and the color filter substrate being respectively disposed on the top sides of steps provided within one of the TFT substrate and the color filter substrate, while reinforcing spacers for resisting a temporarily applied external force are provided below the steps.

6. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Bergeron et al. USPN 5,897,414.

Bergeron et al disclose (see figs. 1-5 and col. 7, lines 36-51) liquid crystal display device comprising: a TFT substrate 36; and a color filter substrate 68, column-shaped spacers 78 for retaining the gap between both the TFT substrate and the color filter substrate being respectively disposed on the top sides of steps provided within one of the TFT substrate and the color filter substrate, while reinforcing spacers for resisting a temporarily applied external force are provided below the steps.

7. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa et al. USPN 6,583,846.

Yanagawa et al disclose in figs. 17-27 liquid crystal display device comprising: a TFT substrate 1A; a color filter substrate 1B; and column-shaped spacers 10 provided between both

Art Unit: 2826

substrates, the column-shaped spacers being respectively disposed on steps provided on the color filter substrate, the steps being formed in the same step as a light shield film pattern 15 or a color filter pattern FIL is formed on the color filter substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601.

ANS

July 24, 2003



NATHAN I. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800